

**Abstract**

An internal planar antenna for small radio apparatuses. The ground plane (310) of the planar antenna is shaped such that it improves the matching of the antenna. The shaping may be done by means of one or more slots (315, 316) in the ground plane. The slot suitably changes the electrical length of the ground plane as viewed from the short-circuit point (S) so that the ground plane will function as a radiator in an operating band of the antenna. Also the slot (331) in the ground plane can be arranged to function as an additional radiator in an operating band of the antenna. Antenna gain will increase as the matching is improved, and the upper band of a dual band antenna, for example, can be made broader.

Fig. 3